# IDAHO CONTENT STANDARDS GRADE 5 MATHEMATICS

## **Standard 1: Number and Operation**

| Goals:  | Objective 1   | Objective 2  | Objective 3  | Objective 4  | Objective 5   | Objective 6  | Objective 7   | Objective 8                                      | Objective 9 |
|---|---|--|--|--|---|--|---|--|-------------|
| Goal 1.1: Understand and use numbers.                   | compare, and order whole numbers through millions                               | 5.M.1.1.2 Identify and apply place value in whole numbers and decimal numbers to thousandths. (307.01.b) |  | commonly used fractions and  |   | 5.M.1.1.6 Apply the number theory concepts of primes, composites, multiples, and factors. (307.01.f)   | 5.M.1.1.7 Select strategies appropriate for solving a problem.                | 5.M.1.1.8 Use appropriate vocabulary.            |             |
| Goal 1.2: Perform computations accurately.              | 5.M.1.2.1 Recall basic multiplication and division facts up to 10's. (307.02.d) | 5.M.1.2.2 Add and subtract decimal numbers through thousandths. (307.02.c)                               | 5.M.1.2.3 Multiply and divide whole numbers. (307.02.a)                                | 5.M.1.2.4 Add and subtract fractions with like denominators without simplification. (307.02.b) | 5.M.1.2.5 Evaluate numerical expressions that include parentheses. (307.02.e)               | 5.M.1.2.6 Select and use an appropriate method of computation from mental math, paper and pencil, calculator or a combination of the three. (307.02.f) | 5.M.1.2.7 Use a variety of strategies to solve real life problems. (308.01.a) | 5.M.1.2.8 Use appropriate vocabulary. (307.02.g) |             |
| Goal 1.3: Estimate and judge reasonableness of results. |   | 5.M.1.3.2 Identify when an estimate is sufficient or when an exact answer is required. (307.03.b)        | 5.M.1.3.3 Explain why a given estimate is an overestimate or underestimate. (307.03.c) | 5.M.1.3.4 Use a four-function calculator to solve complex grade-level problems.                | 5.M.1.3.5 Formulate conjectures and discuss why they must be or seem to be true. (308.02.c) | 5.M.1.3.6 Use appropriate vocabulary. (307.03.d)   |   |  |             |

## **Standard 2: Concepts and Principles of Measurement**

| Goals:   | Objective 1   | Objective 2   | Objective 3                                | Objective 4   | Objective 5  | Objective 6  | Objective 7   | Objective 8   | Objective 9                                      |
|--|---|---|--|---|--|--|---|---|--|
| Goal 2.1: Understand and use U.S. customary and metric measurements. | appropriate units and tools to make formal measurements | 5.M.2.1.2 Estimate length, time, weight, temperature, and volume (capacity) in real-world problems using standard units. (309.01.b) | 5.M.2.1.3 Tell time to the nearest second. | 5.M.2.1.4 Solve real world problems related to elapsed time. (309.01.d) | 5.M.2.1.5 Calculate the perimeter of polygons and the area of rectangles and squares. (309.01.c, 311.01.d) | 5.M.2.1.6 Convert units of length within each system. (309.01.e) | 5.M.2.1.7 Convert days into weeks and years and years into decades and centuries. | 5.M.2.1.8 Recall length, volume (capacity), and mass equivalences involving millimeters, centimeters, meters, milliliters, liters, grams, and kilograms in the metric system. | 5.M.2.1.9 Use appropriate vocabulary. (309.01.g) |
| Goal 2.2: Apply the concepts of rates, ratios, and proportions.      | No objectives at this grade level.                      |   |  |   |  |  |   |   |  |
| Goal 2.3: Apply dimensional analysis.                                | No objectives at this grade level.                      |   |  |   |  |  |   |   |  |

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## **Standard 3: Concepts and Language of Algebra and Functions**

| Goals:   | Objective 1  | Objective 2   | Objective 3   | Objective 4  | Objective 5 | Objective 6 | Objective 7 | Objective 8 | Objective 9 |
|--|--|---|---|--|-------------|-------------|-------------|-------------|-------------|
| Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships. | 5.M.3.1.1 Write a division problem as a proper and an improper fraction.   | 5.M.3.1.2 Translate simple word statements for addition and multiplication into numeric expressions. (310.01.b) | 5.M.3.1.3 Write a fact family when given two factors. | 5.M.3.1.4 Read and use symbols of "<," ">," and "=" to express relationships. (310.01.c) |             |             |             |             |             |
| Goal 3.2: Evaluate algebraic expressions.  | 5.M.3.2.1 Use the following properties as they relate to addition and multiplication: commutative, associative, and distributive. (310.02.a) |   |   |  |             |             |             |             |             |
| Goal 3.3: Solve algebraic equations and inequalities.                                | 5.M.3.3.1 Solve missing factor equations. (310.03.a)   |   |   |  |             |             |             |             |             |
| Goal 3.4: Understand the concept of functions.                                       | 5.M.3.4.1 Identify the rule for a pattern using whole numbers and extend the pattern. (313.01.a)   | 5.M.3.4.2 Use appropriate vocabulary. (313.01.d)  |   |  |             |             |             |             |             |
| Goal 3.5: Represent equations, inequalities and functions in a variety of formats.   | No objectives at this grade level.   |   |   |  |             |             |             |             |             |
| Goal 3.6: Apply functions to a variety of problems.                                  | 5.M.3.6.1 Use patterns to represent problems. (313.02.a)   |   |   |  |             |             |             |             |             |

## **Standard 4: Concepts and Principles of Geometry**

| Goals:   | Objective 1   | Objective 2   | Objective 3   | Objective 4   | Objective 5  | Objective 6  | Objective 7                                      | Objective 8 | Objective 9 |
|--|---|---|---|---|--|--|--|-------------|-------------|
|  | 5.M.4.1.1 Identify, compare<br>and analyze attributes of<br>polygons and polyhedra and<br>develop vocabulary to<br>describe the attributes.<br>(311.01.a) | 5.M.4.1.2 Classify angles without formal measures as acute, right, obtuse, and/or straight. | 5.M.4.1.3 Identify and label points, lines, line segments, rays, and angles. (311.01.b) | 5.M.4.1.4 Discuss and predict<br>the results of sliding,<br>flipping, and turning two-<br>dimensional shapes.<br>(311.01.e) | 5.M.4.1.5 Identify shapes as congruent, similar, or symmetrical. | 5.M.4.1.6 Explain the difference between perimeter and area of a polygon. (311.01.d) | 5.M.4.1.7 Use appropriate vocabulary. (311.01.f) |             |             |
| Goal 4.2: Apply the geometry of right triangles. | No objectives at this grade level.  |   |   |   |  |  |  |             |             |
|  | 5.M.4.3.1 Use ordered pairs to identify and plot points in the first quadrant on a coordinate grid. (311.02.a)  |   |   |   |  |  |  |             |             |

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## **Standard 5: Data Analysis, Probability, and Statistics**

| Goals:   | Objective 1  | Objective 2   | Objective 3 | Objective 4 | Objective 5 | Objective 6 | Objective 7 | Objective 8 | Objective 9 |
|--|--|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Goal 5.1: Understand data analysis.                    | 5.M.5.1.1 Read and interpret tables, charts, bar graphs, and line graphs. (312.01.a)   | 5.M.5.1.2 Use appropriate vocabulary. (312.01.c)                          |             |             |             |             |             |             |             |
| Goal 5.2: Collect, organize, and display data.         | 5.M.5.2.1 Collect, organize, and display the data with appropriate notation in tables, charts, bar graphs, and line graphs. (312.02.a) |   |             |             |             |             |             |             |             |
| Goal 5.3: Apply simple statistical measurements.       | 5.M.5.3.1 Find measures of central tendency - median and mode - with simple sets of data using whole numbers. (312.03.a)               | 5.M.5.3.2 Find the range of a set of data using whole numbers. (312.03.b) |             |             |             |             |             |             |             |
| Goal 5.4: Understand basic concepts of probability.    | 5.M.5.4.1 Predict, perform, and record results of simple probability experiments using fraction notation. (312.04.a)                   | 5.M.5.4.2 Use the language of probability. (312.04.b)                     |             |             |             |             |             |             |             |
| Goal 5.5: Make predictions or decisions based on data. | 5.M.5.5.1 Make predictions and decisions based on data. (308.01.c)   |   |             |             |             |             |             |             |             |

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